



# Emergency Security Operations and Their Safety Measures

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**Abstract**—During emergency the lack of location information and other content of situation of emergency services cause of big disaster element and Sometime delay in emergency hazardous for human life. So, to make the solution to these situations we can make use of technology by which it can be reached to everyone and also in easy way. In this paper we tend to propose the instant action according to emergency. There are many actions and precaution in ENS. For example, somebody need instant police service so according to our project objective he/she can find nearest cop or policeman and there are some other emergency situation solutions. It is helpful for those people who unable to speak or muted people to access the emergency services themselves without depending on others. During road accidents or any kind of accidental situations required information sent to friends, relatives or closest person with emergencies services.

**Keywords**— Emergency, Android Studio, Firebase, Information, Location, Message, Contacts.

## I. INTRODUCTION

In today's world, emergency situations have become a common occurrence. Natural disasters, accidents, and security-related incidents can happen anytime and anywhere, affecting the safety and security of the public. Ensuring the safety and security of the public during such emergencies is a major challenge for governments and organizations around the world. The consequences of not being prepared for such situations can be catastrophic, resulting in loss of life, property damage, and economic losses. To address this issue, there is a need for effective emergency response systems that can provide quick and timely assistance to those in need. These systems need to be accessible to everyone, including those from different socioeconomic backgrounds, and have multiple features that cater to different types of emergencies. The primary

objective of this project is to develop an Emergency Notification System (ENS) that can quickly and efficiently respond to emergencies and ensure the safety and security of the public. The ENS will have features such as instant notification to emergency contacts with location and emergency type, a user-friendly interface, and quick response time for quick calls. The system will be available for free to everyone, ensuring affordability for all. This project will also explore the concept of safety and security values, their impact on corporate culture, and their importance in ensuring the safety and security of the public. Overall, the development and implementation of an effective emergency response system like ENS can greatly benefit the public and enhance their safety and security during emergencies [1][2][3].

The phrase safety and security values were first used in year 1986 by the members of the International Atomic Energy Agency (IAEA) after the incident of Chernobyl Nuclear reactor. The team of IAEA members investigating the accident, where they found that the main cause for the reactor overheating were the deficiency in the organizations safety and security values. After this incident, the safety and security values founds to be the center of interest in order to develop the impact of corporate culture on the safety and security of employees. In last few years, public events, natural disasters, security and safety events and other emergency related events occurs. The security of public has many different attribute from the normal. As when assume different people the result come out to be that different people had distinct needs towards the security and safety it is because of thinking, age, gender and other reasons, So it becomes a challenge for the system to provide safety and security related to all norms [4][5].

Due to lack of early caution and timely changes in attribute of emergencies, all kinds of incidents affecting safety and security of public are concentrated, which results in chaotic

situation and affecting the progress of the government system in managing emergencies. As a main role of the public crisis and risk management system, the security and safety of public risk has become an important part of public governance system. In the face of new emergencies, how to effectively and efficiently evaluate the security and safety of public environment, and to build an effective security risk management system which cover all types of timely changing security operations and to attract the attention of public towards this system so that they can feel that they safe now.

In short, it conveys that there should be a system which would be helpful to the public in any emergency situation they face and at any time with timely response so that the loss would be less [6][7].

This type of system needs many aspects in it but at the end it will result in best public welfare.

## II. EASE OF USE

“Emergency Notifier System is an application which uses during emergency situations for help.” There are some applications available on internet but there are many issues in those applications like some applications are provide only for one-week free trail then ask for money for continuation. So, user must pay for application, or he will have to help himself during emergency situations and these applications are not affordable by everyone. ENS provide a free service to all the users without any charge or advertisement. So, there are no questioning for affordability in ENS. In ENS there are multiple features which contain different functionality as per situation. This application resolves a problem of having multiple application for different causes. User can choose easily that which help or service he required. ENS provide a feature to add multiple contacts to push notification for help. When user required help ENS send notification with user location and emergency type to provided contacts. We have considered emergencies into two categories like Quick calls and others emergency. Quick calls are proposed for instant help like vehicle accident need medical help. This type of calls are mostly need quick response in order to reduce the loss. There are several incidents happened due to late response to the people where they need quick help, as sometime there is delay in sending the information regarding the incident and sometime delay in receiving the information [8][9].

## III. LITERATURE SURVEY

Nowadays street traffic injuries are a chief public problem, ensuing in an approx. 1.2 million deaths and 50 million accidents global each 12 months. these days, visitors' accidents are some of the most important purposes of deaths and injury. According to global records India is experiencing the best fee of road accidents. according to move studies Wing, Ministry of street shipping and Highways, such avenue injuries and accidents in India

among year 1970 and 2011, the quantity of road accidents accelerated 4.4 times together with 9.8 instances increase in fatalities and 7.3 times boom within the range of folks injured in such motive. So, techniques to lessen street injuries rigorousness are of terrific hobby. Such occasions show up due to many motives however as the primary reason of these accidents is delay in hospitalization. Many individual dies because of not getting well timed resource. This trouble effects very hazardous. So well timed arrival of ambulance is major want to conquer such trouble [10][11]

Ambulance reaction Time (ART) is described with the aid of the various researchers, in step with (Lee, 2012) define that response time is the time c language between a patient's call to the emergency services and the arrival of the ambulance. from time to time, it is additionally known as the waiting time. Aboueljine et al., (2012) defined, the time required to reply to an emergency name by achieving to the patient's place is known as reaction time [12][13].

## IV. EXISTING SYSTEM

There are some existing systems in Emergency Management, but these systems are not reliable and effective. There are some systems provided by the government like 100 dial and 101, 1024 women helpline 102 and 112 medical help lines etc. but end these are time taken process and dial manually.

In IT field there are some software and applications which provide solution for certain problem but some of them are old and non-functional and which are functional that required premium or only one week, one month free trials if we go through the play store in Android and iOS App Store show there are SOS applications which perform only one or 2 task that's why there are lack of information like location, type of emergency and some additional information [14][15].

There is a system proposed by Indian government which name is 112 but it has server issues and bugs not working everywhere so there are no reliable end user friendly existing systems for emergency services notification [16][17].

## V. PROPOSED SYSTEM

ENS system proposed to establish a fair connection to selected people during any unusual action or emergency situation as shown in Fig. 1.1. The objective of our paper is to provide the instant action according to their problem or in emergency [18][19].

It is helpful for those people who unable to speak or muted people to access the emergency situation solution.

### A. LOCATION GATHERING

Location is a main factor of any help in unfair situation. ENS fetch the Location of the user and send it via message to added contact numbers. It required permission of the user device for fetch location [20][21].

**B. EMERGENCY TYPE**

User can choose any specific emergency among the following i.e. as per requirement the person can call an emergency for purpose like

- 1) Road Accidents
- 2) Medical Emergency
- 3) Fire Emergency
- 4) Women safety
- 5) child abuse
- 6) Other

**C. PANIC BUTTON**

Emergency Notifier System provide a functionality of panic button which is used to direct call to saved number in critical condition [22][23].

**D. PANIC SHAKE**

It is type of notification shake help at the time of emergency. This feature provides the notification to the added contacts in the form of pop-up notification which state about the need of emergency. This pop-up notification consists of user current location through which anyone can reach to the user. This feature helps the user to quickly notify anyone by shaking the device at least three times.

**E. SPECIFIED BUTTON**

ENS has a collection of buttons which consist of various type of emergency related contact numbers like police, ambulance, fire. These buttons are used for specified problem with location. These buttons are useful in emergency where the user can make immediate call to the specified button contacts. This function provides all emergency contacts in one place which provide ease to the user. These buttons are in main interface of the application so that user can quickly use that. This function makes the application more effective to use.

**F. CURRENT LOCATION**

This application has a current location feature which tells user their current location by pointing on map. It uses google maps API.

**G. SIREN ALERT**

Siren alert has a police siren sound which can be activated by pressing power button three time without open the application.

**H. POWER-BUTTON ACCESS**

Some features of this application activate by pressing power button at least 3 times and also deactivate by pressing power button. It helps to reduce time for user to access the feature of application.

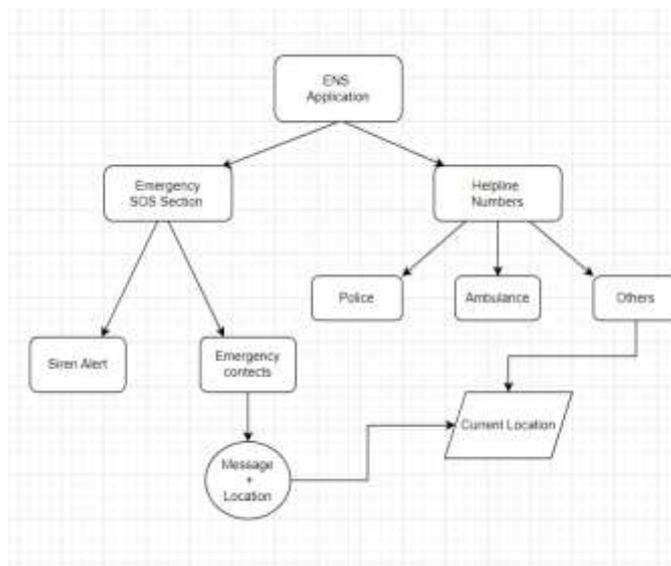


Fig.1.1

**VI. RESULT AND DISCUSSION**

In results, there are screenshots of application features and functionality. User name and location part are blurred.

- 1) Fig. 2.1 contain contents which user can save into application and use during emergency.
- 2) Fig. 2.2 contain current location of user using there coordinates.
- 3) Fig. 2.3 contain sent message from the user with user current location. Location and user name blurred in the image.



Fig. 2. 1

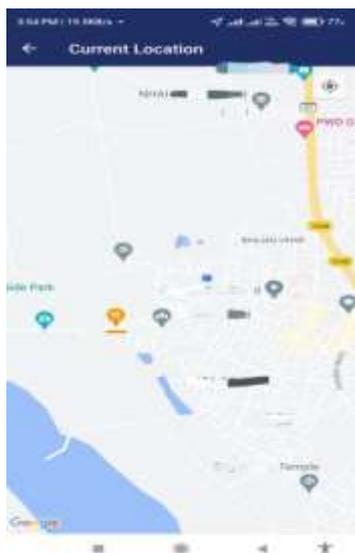


Fig. 2.2



Fig. 2.3

This application had accurate location of user during testing and test completed with 93% accuracy.

## VII. CONCLUSION AND FUTURE SCOPE

This project has been developed to satisfy all the needs and requirements of the users. This project main purpose is to make an application that provide help in any type of emergency by providing needs like users location, message and call facility. Our project provide a user-friendly interface which consist of features like panic button, adding contacts, notify to added contacts in emergency situation. Existing system is not fulfilling the requirements of the user they require subscription and money or monthly charges for fully access the application, this makes the system less reliable and costly. Our project erase these drawbacks and fully accessible to every user irrespective of charges or subscriptions.

Our project provide high rate of accuracy which turns into better results. ENS have multiple features at a place which

makes ENS differ from existing system. In the conclusion this project will provide a required service for everyone and anywhere. The purpose is to make effective and efficient decision during emergencies as early as possible.

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